

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claims 1-44 (cancelled)

Claim ~~45~~ (new) A network address translation device for facilitating message packet communication between a first application having an internal address valid in an internal address realm and one or more applications in an external address realm, said internal address realm having available to it a set of available addresses valid for use in the external address realm, comprising :

an address translator for translating addresses included in the headers of message packets incoming to and outgoing from the internal address realm in accordance with translation rules that resolve the incompatibility of the internal and external address realms;

an address manager for establishing and storing the translation rules, said address manager having access to the set of available addresses valid for use in the external address realm; and

a control channel communicating with the address manager for receiving from the first application a service request message for establishing in response to the first application's service request a translation rule specified by the first application.

Claim ~~46~~ (new) The network address translation device of claim ~~45~~, wherein the first application specifies that the translation rule to be established associates the first application's internal address with an available external address and the first application has access to the associated available external address as data for an outgoing message packet.

Claim ~~47~~ (new) The network address translation device of claim ~~45~~ wherein the first application specifies that the translation rule to be established associates the first application's internal address with an available external address that is a particular IP address or within a specified range of IP addresses.

Claim ~~48~~⁴ (new) The network address translation device of claim ~~45~~¹ wherein the first application specifies that the translation rule is one of two or more translation rules applicable to an incoming message packet, where the selection of which translation rule is applied is contingent on address information in the incoming message packet.

Claim ~~49~~⁵ (new) The network address translation device of claim ~~46~~² wherein the available external address requested by the first application is a terminating address.

Claim ~~50~~⁶ (new) The network address translation device of claim ~~46~~² wherein the available external address requested by the first application is an originating address.

C! Claim ~~51~~⁷ (new) The network address translation device of claim ~~46~~² wherein the internal address realm is a private network and the external address realm is the Internet.

D Claim ~~52~~⁸ (new) The network address translation device of claim ~~45~~⁴⁵ wherein the internal address realm is a private network and the external address realm is the Internet and the address manager establishes a translation rule by associating an address valid in the private network realm with an address valid in the Internet.

Claim ~~53~~⁹ (new) The network address translation device of claim ~~48~~⁴, wherein the selection of which translation rule is applied is made in response to the presence or absence of specified originating address information in the incoming message.

Claim ~~54~~¹⁰ (new) The network address translation device of claim ~~45~~¹¹, wherein the communication facilitated is peer-to-peer application communication.

Claim ~~55~~¹¹ (new) The network address translation device of claim ~~45~~¹², wherein the communication facilitated is peer-to-peer telephony communication.

¹²
Claim ~~56~~ (new) The network address translation device of claim ~~47~~, wherein the translation rule to be established forces the outgoing message packet to have a destination address in a transit network.

¹¹³
Claim ~~57~~ (new) The network address translation device of claim ~~47~~, wherein the translation rule to be established forces at least a portion of the packet communication between the first application and the second application to pass through a specified network.

¹¹⁴
Claim ~~58~~ (new) A method for facilitating message packet communication between a first application having an internal address valid in an internal address realm and one or more applications in an external address realm, said internal address realm having available to it a set of addresses valid for use in the external address realm, comprising :

providing the internal address realm with a network address translation device having an address translator for translating addresses included in the headers of message packets incoming to and outgoing from the internal address realm in accordance with translation rules that resolve the incompatibility of the internal and external address realms;

providing an address manager for establishing and storing the translation rules, said address manager having access to the set of available addresses valid for use in the external address realm; and

providing a control channel communicating with the address manager for receiving from the first application a service request message for establishing in response to the first application's service request a translation rule specified by the first application. }

¹¹⁵
Claim ~~59~~ (new) The method of claim ~~58~~, wherein the step of providing a control channel comprises receiving from the first application a request that specifies that the translation rule to be established associates the first application's internal address with an available external address and providing the first application access to the associated available external address as data for an outgoing message packet.

116 14
Claim 60 (new) The method of claim 58 wherein the step of providing a control channel for receiving a request comprises receiving from the first application a request that specifies that the translation rule to be established associates the first application's internal address with an available external address that is a particular IP address or within a specified range of IP addresses.

117 14
Claim 61 (new) The method of claim 58 wherein the step of providing a control channel for receiving a request comprises receiving from the first application a request that the translation rule is one of two or more translation rules applicable to an incoming message packet, where the selection of which translation rule is applied is contingent on address information in the incoming message packet.

118 14
Claim 62 (new) The method of claim 58 wherein the step of providing a control channel for receiving a request comprises receiving from the first application a request for a translation rule for a terminating address.

119 14
Claim 63 (new) The method of claim 58 wherein the step of providing a control channel for receiving a request comprises receiving from the first application a request for a translation rule for an originating address.

120 14
Claim 64 (new) The method of claim 58 wherein the internal address realm is a private network and the step of providing an address manager comprises providing an address manager having access to a set of available addresses valid in the Internet.

121 14
Claim 65 (new) The method of claim 58 wherein the internal address realm is a private network and the external address realm is the Internet and the step of providing an address manager comprises providing an address manager that establishes a translation rule by associating an address valid in the private network realm with an address valid in the Internet.

~~22~~
Claim ~~66~~ (new) The method of claim ~~61~~, wherein step of providing a control channel for receiving a request comprises receiving from the first application a request that the translation rule is one of two or more translation rules applicable to an incoming message, where the selection of which translation rule is applied is made in response to the presence or absence of specified originating address information in the incoming message.

~~23~~
Claim ~~67~~ (new) The method of claim ~~58~~, wherein the communication facilitated is peer-to-peer application communication.

~~24~~
Claim ~~68~~ (new) The method of claim ~~58~~, wherein the communication facilitated is peer-to-peer telephony communication.

~~25~~
Claim ~~69~~ (new) The method of claim ~~60~~, wherein the step of providing a control channel for receiving a request comprises receiving from the first application a request that the translation rule to be established forces the outgoing message packet to have a destination address in a transit network.

~~26~~
Claim ~~70~~ (new) The method of claim ~~60~~, wherein step of providing a control channel for receiving a request comprises receiving from the first application a request that the translation rule to be established forces at least a portion of the packet communication between the first application and the second application to pass through a specified network.